

**In the United States Patent & Trademark Office**

Docket No. PARSE-C4

Applicants: M. Seul et al.

Serial No.: Continuation of 10/365,933

Parent Filed: 02/13/2003

Parent Title: Encoded Random Arrays and Matrices

**Preliminary Amendment**

Commissioner for Patents

PO BOX 1450

Alexandria VA 22313-1450

Dear Sir:

Please amend the title of the above application to read as follows:

“Chips in Fluid Confinement Regions”

Please delete the abstract and add the following new abstract:

Disclosed is an apparatus and method of maintaining chips or arrays of particles, or arrays of particles deposited on chip surfaces, in a designated area on a substrate surface. This is accomplished by having hydrophilic chips or arrays of particles, and a substrate which has a series of hydrophilic regions designed to accommodate the chips/arrays of particles, surrounded by hydrophobic regions. In the presence of aqueous solution, the chips or arrays of particles are held in the designated regions.

Please delete claims 1 to 46 of the parent application and add the following new claims 47 to 54:

47. A substantially planar substrate which is part of a biological assay system comprising:

several discrete hydrophilic regions on at least one planar surface, each of the hydrophilic regions being surrounded by a hydrophobic region, wherein the hydrophilic regions are designed to accommodate a chip or an array of particles, or an array of particles deposited on a chip, and wherein a biological reagent is bound to the particles.

48. The substrate of claim 47 wherein chips are accommodated in the hydrophilic regions and at least one surface of each chip is substantially hydrophilic.

49. The substrate of claim 47 wherein the hydrophilic regions are within the perimeter of indentations in the planar surface of the substrate, said indentations being surrounded by the hydrophobic regions.

50. The substrate of claim 47 wherein different types of particles have different biological reagents bound thereto.

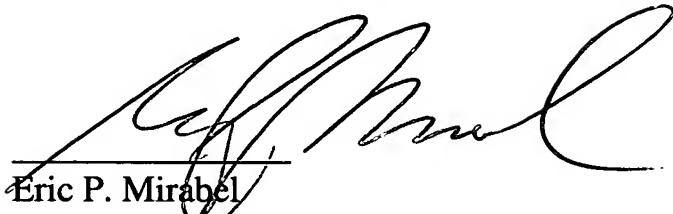
51. A substantially planar substrate substantially comprising silicon or doped silicon which is part of a biological assay system, comprising: several discrete hydrophilic regions formed by chemically altering specific regions of the planar surface, wherein each of said regions is surrounded by a hydrophobic region, and wherein the hydrophilic regions are designed to accommodate a chip or an array of particles, or an array of particles deposited on a chip, and wherein a biological reagent is bound to the particles.

52. The substrate of claim 51 wherein chips are accommodated in the hydrophilic regions and at least one surface of each chip is substantially hydrophilic.

53. The substrate of claim 51 wherein the hydrophilic regions are within the perimeter of indentations in the planar surface of the substrate, said indentations being surrounded by the hydrophobic regions.

54. The substrate of claim 51 wherein different types of particles have different biological reagents bound thereto.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Eric P. Mirabel', written over a horizontal line.

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